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[0083] Phase shifting techniques provide the possibility of concentration of RF-energy at a predetermined location ~~depth with respect to the skin surface~~ by variation of position of RF-wave maximum

[0100] The inherent advantages of system **30** are clear from comparison of thermo-grams of energy dissipation zone **5** using system **30** (Figure 4) and a prior art bipolar (i.e. 2 electrode) system (Figure 5). Each thermo-gram is accompanied by a key on the left which indicates that the colors white, yellow, orange, red, green, blue and violet represent concentrations of heat energy in decreasing order. In each figure, an apple slice is used as biological tissue 4. ~~Specifically, it is clear that system 30 moves zone 4 away from surface 6 of tissue 4.~~

[0101] Figure 4 clearly shows that when applicator **3** of system **30** is contacted **with** surface **6** of tissue **4**, delivery of output energy **17** results in delivery of energy primarily to zone **5**. Line **26** passes through the center of zone **5**. ~~The temperature at surface 6 of tissue 4 is clearly lower than along line 26 in zone 5. In other words, operation of system 30 creates a reverse thermal gradient and obviates the need for a cooling system to prevent undesired overheating of surface 6.~~

[0102] In sharp contrast, Figure 5 clearly shows that when applicator **3** of a prior art bipolar system is contacted with surface **6** of tissue **4**, delivery of output energy **17** results in delivery of energy primarily to a zone **5** which is adjacent to surface **6** of tissue **4**. This reduces the distance between line **26**, which passes through the center of zone **5**, and surface **6**. In other words, the prior art bipolar system delivers heat energy primarily in proximity to surface **6**. The thermo-gram of Figure 5 illustrates a distribution of heat energy observed when the prior art bipolar system is operated with a cooling system. ~~Despite this cooling system, no reverse thermal gradient is achieved.~~

[0131] Preferably, applicator **3** is constructed from aluminum or an aluminum alloy covered by alumina coating with a thickness 40-50 μm. ~~Applicator 3 serves also to cool tissue surface 6, thereby obviating the need for a separate cooling system~~.

[0134] The applied oscillating RF-field stimulates all dipole molecules (mostly water molecules **1**) to rotate and vibrate with consequent heating of energy dissipation zone **5**.

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Amendments to Delete Paragraphs

1) Please delete from the specification paragraph [0006] the text of which is:

"Previously available alternatives are characterized by disadvantages which are obviated by the present invention."

4/20/09

2) Please delete from the specification paragraph [0084] the text of which is:

"Organization of energy dissipation inside of subcutaneous tissue insures maintenance of a relatively low temperature on the skin surface (epidermis). This provides a reverse thermal gradient without use of an external cooling system.

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3) Please delete from the specification paragraph [0097] the text of which is:

It is an inherent advantage of system 30 that its operation produces a reverse thermal gradient so that surface 6 of biological tissue 4 is maintained at a lower temperature than predetermined energy dissipation zone 5 without use of a cooling device.

4) Please delete from the specification paragraph [0122] the text of which is:

Performance of 102, 104, 105, 108, 110 and 112 produce 114 a reverse thermal gradient so that surface 6 of biological tissue 4 is maintained at a lower temperature than predetermined energy dissipation zone 5, thereby obviating the need for a cooling device.

5) Please delete from the specification paragraph [0135] the text of which is:

It is an advantage of the present invention that epidermal layer 6 is heated much less than subcutaneous tissue 4. An inverse thermal gradient that is provided by intensive cooling of epidermis that described by Thermage patents is achieved automatically with deep heating of tissues.